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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,289	07/10/2001	Didier Arnoux	264/264	7287

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PATENT DEPARTMENT
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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,289

Applicant(s)

ARNOUX ET AL.

Examiner

Rabon Sergent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 19, 2004 has been entered.
2. Claims 33-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what limitation is intended to be conveyed by the language, "without the application of external heat", because the claim has previously set forth that all foregoing steps are carried out at room temperature.

3. Claims 33-49 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner has reviewed the specification and has not found support for the language, "without the application of external heat".
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 20-23, 27, 29, 33-36, 39, 41-43, 45, and 49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 6-16767.

The reference discloses a polyurethane composition comprising the reaction of a prepolymer, derived from toluene diisocyanate and polytetramethylene glycol, with DETDA, in the presence of phthalate or phosphate plasticizers, such as dioctyl phthalate, octyldiphenyl phosphate, and triphenyl phosphate. The reference further discloses that the reaction proceeds at temperatures as low as 30°C. See pages 1-5 and 7 of the translation.

6. Firstly, applicants have argued that the amendments to claims 20 and 42 have excluded the disclosed octyldiphenyl phosphate plasticizer. In response, it is not clear that the amendments have excluded the disclosed compound, because octyldiphenyl phosphate is considered to at least encompass ethylhexyldiphenyl phosphate, and the position is further taken that ethylhexyldiphenyl

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phosphate meets the claims. To support this position, the examiner refers applicants to page 493 of Sax et al., wherein it is disclosed that the octyl radical encompasses the 2-ethylhexyl radical.

Alternatively, if not anticipated, the position is taken that it would have been obvious to substitute one isomeric diphenyl phosphate plasticizer for another, given that one would have expected the isomeric plasticizers to function as equivalents. The examiner has considered applicants' argument that octyldiphenyl phosphate of the reference fails to encompass ethylhexyldiphenyl phosphate. In response to applicants' argument, the position is taken that applicants have set forth no definitive evidence that the claimed compound is not encompassed by the prior art. Applicants' argument is considered to be purely speculative. It is noted that this issue is not relevant to claims 33-36, 39, 41, 43, and 49. Furthermore, applicants' argument that plasticizers containing branched chain groups confer unexpected and superior properties to the composition, compared to the use of plasticizers containing straight chain groups, has not been supported by means of objective evidence. It is noted that applicants have disclosed the use of plasticizers containing straight chain alkyl groups; therefore, in the absence of evidence to the contrary, it is argued that applicants appreciated the equivalence or interchangeability of the branched chain and straight chain plasticizers.

7. Secondly, applicants have argued that the amendment to claim 33, requiring that the process be performed at room temperature without the application of external heat, distinguishes the claims from the prior art, because the prior art discloses that the reactants are heated. In response, it is noted that the reference merely states that the reactants are preheated prior to mixing and that the mold is preheated prior to introduction of the reactants; therefore, it is by no means clear that applicants' amendment distinguishes the instant invention from the prior art, because applicants' claimed process is only concerned with not applying heat during the steps of contacting, pouring,

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and curing. It is not seen that any language in the claim precludes steps of preheating, wherein the preheating occurs outside of the instantly claimed contacting, pouring, and curing step.

Furthermore, the position is maintained that since the instant specification essentially sets forth "room temperature" and temperatures of 15 to 35°C as being equivalent, the skilled artisan would interpret the claimed "room temperature" limitation as being any temperature that falls within the 15 to 35°C range. Accordingly, the instant temperature and prior art temperature continue to overlap. Alternatively, if not anticipated, the position is taken that the respective temperatures are close enough that one would have expected the respective processes and products to have equivalent characteristics. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Furthermore, it is argued that it would have been obvious to reduce the processing temperature for a casting process, since the rapid reaction rate associated with the elevated temperatures of a RIM process would be unnecessary and unwelcome.

8. Claims 20-32, 37, 38, 40, 44, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-16767, in view of Singh et al. ('371) and further in view of Rizk et al. ('860), Peter ('258), and Gabbard et al. ('956).

As aforementioned within paragraph 2, the primary reference discloses the production of polyurethanes, wherein a prepolymer, derived from toluene diisocyanate and polytetramethylene glycol, is reacted with a hindered aromatic diamine, in the presence of phthalate or phosphate plasticizers, such as dioctyl phthalate, octyldiphenyl phosphate, and triphenyl phosphate. The reference further discloses that the reaction proceeds at temperatures as low as 30°C. See pages 1-5 and 7 of the translation. See paragraph 7 of this Office action for remarks concerning the instant and disclosed processing temperatures.

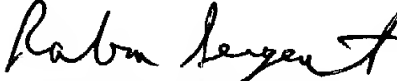
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9. The primary references are silent with respect to the dimethylthiotoluene diamine curing agent and specific plasticizers, such as isodecyl diphenyl phosphate, butyl benzyl phthalate, and tributoxyethyl phosphate; however, these components were known constituents of polyurethanes at the time of invention. Dimethylthiotoluene diamine was a known hindered diamine for curing toluene diisocyanate based prepolymers. See column 3, lines 61+ within Singh et al. Plasticizers corresponding to those claimed are disclosed within Gabbard et al. at column 4, Peter at column 2, lines 47-52, and Rizk et al. at column 6. The position is taken that it would have been obvious to incorporate the curing agent and plasticizers of the secondary references within the compositions of the primary reference, because it has been held that it is *prima facie* obvious to utilize a known component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

10. The examiner has considered applicants' arguments; however, the position is maintained that the examiner has set forth a *prima facie* case of obviousness, and applicants have failed to rebut the *prima facie* case of obviousness by such means as a showing of unexpected results, relative to the plasticizers set forth within the primary reference and commensurate in scope with the claims.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
September 15, 2004


RABON SERGENT
PRIMARY EXAMINER